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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,097	10/10/2003	Laxmi C. Tandon	205017-9010	5500

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EXAMINER
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WYSOMIERSKI, GEORGE P

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/685,097	TANDON ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	George P. Wyszomierski	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 1/19/06 (RCE, Amendment, Declaration).
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

*Claim Interpretation*

1. Several of the instant claims recite certain elements in amounts "less than" a given percentage. The examiner's position is that compositions containing from 0% to the given percentage of those elements fall within the scope of the claims.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lawrence et al. (U.S. Patent 5,948,353).

Lawrence discloses a material for brake drums and rotors made of a gray iron composition containing amounts of carbon, manganese, silicon, phosphorus, sulfur, molybdenum, copper and chromium which overlap the amounts recited in the instant claims. While no specific embodiment of Lawrence meets all of the claimed limitations, the overlap in composition between the prior art and the claims creates a prima facie case of obviousness of the instant claims because the prior art compositions possess utility over the entire disclosed range in the Lawrence patent (compare *In re Malagari*, 182 USPQ 549), which utility is the same as the disclosed utility of the present invention (brake drums and rotors, see Lawrence column 1, line 16).

4. In remarks filed with the present Request for Continued Examination (RCE), Applicant alleges that the present invention can be distinguished from Lawrence in terms of properties, carbon equivalent, chromium content, magnesium content, or tin content, and/or that the Declaration of Laxmi Tandon indicates an unobvious distinction between the Lawrence materials and those of the present invention. Applicant's arguments have been carefully considered, but are not persuasive of patentability because:

a) With respect to properties, Applicant suggests that the machinability of the present invention is distinct from that of the prior art, but provides no specific data in this respect.

b) With regard to carbon equivalent, this is purely a mathematical function of the amounts of carbon, silicon and phosphorus present (see paragraph [0002] of the present specification); thus prior art compositions containing the same amounts of those elements as the respective claimed compositions would also possess the same carbon equivalent value.

c) With respect to chromium and magnesium, none of the instant claims require the presence of these elements. Claims 8, 9, 10, 15, 16, 17, 29, 30, 31, 35, 36 and 37 permit their presence in an amount from 0% up to a certain percentage; these amounts overlap the amounts of these elements in the Lawrence patent.

d) With regard to tin content, Lawrence column 3, lines 15-18 indicates that

"although not wishing to be bound by any particular theory, it is believed that the level of tin included in the composition creates a finer microstructure, reducing the level of free ferrite in the cast iron."

One not concerned with fineness of microstructure or level of free ferrite would thus be motivated to reduce the tin content of the prior art compositions.


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e) With regard to the Tandon Declaration, the statements therein regarding copper content do not patentably distinguish the invention over the prior art because even if one accepts Declarant's contention that Lawrence only teaches a narrower range of 0.6 to 0.7% copper, this still overlaps the presently claimed amount of about 0.3 to 0.6% copper. The comparative data presented in the Declaration between a composition containing 0.4 to 0.5% molybdenum and a composition containing 0.6 to 0.8% molybdenum does not distinguish the invention from the prior art because the prior art discloses and claims compositions that contain as much as 0.75% molybdenum; see Lawrence claim 1. Thus, an effective comparison has not been made between the closest prior art and the invention. It is noted that an endpoint of a claimed range has been held to define a specific embodiment of the claim; see *Ex parte Lee* (31 USPQ 2d 1105).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. All patent application related correspondence transmitted by facsimile must be directed to the new central facsimile number, (571)-273-8300. This new Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
GEORGE WYSZOMIERSKI  
PRIMARY EXAMINER  
GROUP 0700

GPW  
March 30, 2006